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*A Letter of Dr. John Wallis,
(Geom. Prof. Oxon, and F. R. S.)
to Mr. Thomas Beverly; Concern-
ing his Method for Instructing Per-
sons Deaf and Dumb.*

S I R,

I Have recieved your Letter of Sept. 22. Wherin you tell me the case of a Family, wherein you are concerned; which is really very sad. Of Eight Children now living, Five are Deaf and Dumb. (And, I suppose, Dumb because Deaf.)

You desire my Directions, How best to supply that Defect: Having had some Acquaintance (I understand) with Mr. *Alexander Popham*, (who, I think, is yet living,) whom (being born Deaf) I taught (about four or five and thirty years ago) to Speak distinctly, (though I doubt, he may now have forgot much of it ;) And, to Understand a Language, so as to express his mind (tolerably well) by Writing, and to understand what is written to him by others. As I had, before, taught Mr. *Daniel Whaley*: Who was Deaf also; but is lately dead.

Others, who were not Deaf, but had great Impediments in their Speech, (who Stuttered extremely, or who have not been able to pronounce some Letters,) I have taught to Speak very Distinctly, and to pronounce those letters which before they could not: So as perfectly to conquer

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quer that difficulty; at least so as that it was very little (if at all) discernable.

Some other Deaf persons, I have not attempted teaching them to Speak; but only so as (in good measure) to understand a Language, and to express their mind (tolerably well) in Writing. Who have thereby attained a much greater measure of Knowledge in many things, than was thought attainable to persons in their circumstances; and become capable (upon further improvement) of such further Knowledge as is attainable by Reading.

The former part of this Work (teaching to *Speak*, or to *Speak Plain*) is to be done, by Directing them to Apply their Tongue, Lips, and other Organs of Speech, to such Postures and Motions, as are proper for the Formation of such and such Sounds (respectively) as are used in Speech. And, then, the Breath, emitted from the Lungs, will Form those Sounds; whether the person Speaking do Hear himself, or not.

Of which respective Formation, of all Sounds commonly used in Speech, I have given a full Account (and, I think, I am the first who have done it,) in my Treatise *De Loquela*; prefixed to my *Grammar of the English Tongue*; first published in the year 1653. In pursuance of which, I attempted the Teaching of Deaf persons to speak.

And this is indeed the Shorter work of the Two. (however looked upon as the more Stupendous.) But this, without the other, would be of little use. For, to pronounce words only as a Parrot, without knowing what they signify, would do us but little service. And it would by degrees (without a Director to correct Mistakes) come to be lost in part. For, like as one who Writes a fair Hand, if he become Blind, would soon forget the exact Draught of his Letters, for want of an Eye to direct his Hand: So he, who doth not Hear himself Speak, must needs be apt to forget the Niceness of Formation (without a Prompter) for want of an Ear to regulate his Tongue.

The other part of the Work (to teach a Language) is what you now enquire about.

In order to this; it is Necessary in the first place, That the Deaf person be taught to Write. That there may be somewhat to express to the Eye, what the Sound (of Letters) represents to the Ear.

'Twill next be very Convenient (because Pen and Ink is not always at hand) that he be taught, How to design each Letter, by some certain Place, Position, or Motion, of a Finger, Hand or other Part of the Body; (which may serve instead of Writing.) As for instance, The five Vowels *a e i o u*; by pointing to the Top of the five Fingers: And the other Letters *b c d* &c. by such other place or posture of a Finger, or otherwise, as shall be agreed upon.

After this; a Language is to be taught this Deaf person, by like methods as Children are at first taught a Language; (though the thing perhaps be not needed.) Only with this difference: Children learn Sounds by the Ear; but the Deaf person is to learn Marks (of those sounds) by the Eye. But both the one and the other, do equally signify
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the same Things or Notions; and are equally (*significancia ad placitum*) of meer Arbitrary Signification.

'Tis then most natural (as Children learn the Names of Things) to furnish him (by degrees) with a *Nomenclator*; containing a competent number of Names, of things common and obvious to the Eye; (that you may Shew the Thing answering to such a Name.) And these digested under convenient Titles; and placed (under them) in such convenient Order (in several Columnes, or other orderly situation in the Paper,) as (by their Position) best to express, to the Eye, their Relation or Respect to one another. As, *Contraries* or *Correlatives*, one over against the other; *Subordinates* or *Appurtenances*, under their Principals. Which may serve as a kind of *Local Memory*.

Thus, (in one Paper) under the title *Man-kind*, may be placed, (not Confusedly, but in decent Order,) *Man*, *Woman*, *Child*, (*boy*, *girl*;) And, if you please, the Names of some known persons, (of the family, or others :) with Spaces left to be supplied with other like Names or Words, as after there may be occasion.

Then (in another Paper) under the Title *Body*, may be written (in like convenient order) *Head*, (*hair*, *skin*, *ear*,) *Face*, *forehead*, *eye*, (*eyelid*, *eye-brow*,) *cheek*, *nose*, (*nostril*,) *mouth*, (*lip*, *chin*,) *Neck* (*throat*,) *Back*, *Breast*, *Side*, (*right-side*, *left-side*,) *Belly*, *Shoulder*, *Arm*, (*elbow*, *wrist*, *hand*, (*back*, *palm*,) *finger*, (*thumb*, *knuckle*, *nail*,) *Thigh*, *knee*, *leg*, (*shin*, *calf*, *ankle*,) *foot*, (*heel*, *sole*,) *toe*. With like Spaces, as before, for more to be added, as there is occasion.

And when he hath learned the import of Words in each Paper; let him Write them (in like manner) in distinct Leaves or Pages of a Book (prepared for that purpose) to confirm his Memory, and to have recourse to it upon occasion.

In a Third Paper, you may give him the *Inward* parts. As, *Scal*, (*brain*,) *Throat*, (*wind-pipe*, *gullet*,) *Stomach*, (*guts*,) *heart*, *lungs*, *liver*, *spleen*, *kidney*, *bladder*, (*urine*,) *vein*, (*blood*,) *bone*, (*marrow*,) *flesh*, *fat*, &c.

In another Paper, under the title *Beast*, may be placed; *Horse* (*stone-horse*, *gelding*,) *mare*, (*colt*,) *Bull*, (*ox*,) *cow*, *calf*. *Sheep*, *ram*, (*weiber*,) *ew*, (*lamb*,) *Hog*, *boar*, *sow*, *pig*. *Dog*, (*mastiff*, *hound*, *grey-hound*, *spannel*,) *bitch*, (*whelp*, *puppy*,) *Hare*, *rabbit*. *Cat*, *mowse*, *rat*, &c.

Under the title *Bird*, or *Fowl*; put *Cock*, (*capon*,) *hen*, *chick*. *Goose*, (*gander*,) *gosling*. *Duck* (*drake*,) *Swan*, *Crow*, *Kite*, *Lark*, &c.

Under the title *Fish*, put *Pike*, *Eel*, *Plaice*, *Salmon*, *Lobstar*, *Crab*, *Oyster*, *Crawfish*, &c.

You may then put *Plants* or *Vegetables*, under several *Heads*, or *Subdivisions* of the same Head. As, *Tree*, (*root*, *body*, *bark*, *bough*, *leaf*, *fruit*;) *Ook*, *ash*, *apple-tree*, *pear-tree*, *vine*, &c. *Fruit*, *apple*, *pear*, *plum*, *cherry*, *grape*, *nut*, *orange*, *lemon*. *Flower*; *rose*, *tulip*, *gilliflower*. *Herb*, (*weed*,) *grass*. *Corn*; *wheat*, *barley*, *ry*, *pea*, *bean*.

And the like of *Inanimates*. As, *Heaven*; *sun*, *moon*, *star*. *Elements*; *earth*, *water*, *air*, *fire*. And, (under the title *Earth*;) *clay*, *sand*, *gravel*, *stone*. *Metal*; *gold*, *silver*, *brass*, (*copper*,) *iron*, (*steel*,) *lead*, *tin*, (*peimter*,) *glass*. Under the title; *Water*; put *Sea*, *pond*, *river*, *stream*. Under

that of *Air*; put *Light*, dark, mist, fog. Cloud; wind, rain, hail, snow; thunder, lightning, rain-bow. Under that of *Fire*; Coal, flame, smoke, foot, ashes.

Under the title *Clothes*; put *Woollen*, (cloth, stuff,) *Linen*; (bolland, lawn, lockarum,) *Silk*, (Satin, Velvet.) *Hat*, cap, band, doublet, breeches, coat, cloak, stockings, shoe, boot, shirt, petty-coat, gown, &c.

Under the title *House*; put *Wall*, roof, door, window, (casement,) room.

Under *Room*: put *Shop*, hall, parlour, dining-room, chamber, (study, closet,) kitchen, cellar, stable, &c.

And, under each of these, (as distinct *Heads*,) the *Furniture* or *Utenfils* belonging thereunto; (with *Divisions* and *Subdivisions*, as there is occasion;) which I forbear to mention, that I be not too prolix.

And, in like manner, from time to time, may be added more *Collections* or *Classes* of *Names* or *Words*, conveniently digested under distinct *Heads*, and suitable *Distributions*; to be written in distinct *Leaves* or *Pages* of his *Book*; in such order as may seem convenient: Which I leave to the prudence of the *Teacher*.

When he is furnished with a competent number of *Names*, (though not so many as I have mentioned:) it will be seasonable to teach him (under the titles *Singular*, *Plural*,) the *Formation* of *Plurals* from *Singulars*; by adding *s* or *es*. As, *Hand*, hands; *Face*, faces; *Fish*, *Fishes*; &c. with some few *Irregulars*; As, *Man*, men; *Woman*, women; *Foot*, feet; *Tooth*, teeth; *Moose*, Mice; *Louse*, lice; *Ox*, oxen, &c.

Which (except the *Irregulars*) will serve for *Possessives* (to be after taught him,) which are formed from their *Primitives*, by like addition of *s* or *es*. Except some few *Irregulars*; As, *My*, mine; *Thy*, thine; *Ours*, ours; *Your*, yours; *His*; *Her*, hers; *Their*, theirs, &c.

And in all those, and other like cases, it will be proper first to shew him the *Particulars*, and then the *General Title*.

Then teach him (in another *Page*, or *Paper*) the *Particles*; *A*, an; *The*, this, that; *These*, those.

And the *Pronouns*; *I*, me, my, mine; *Thou*, thee, thy, thine; *We*, us, our, ours; *Ye*, you, your, yours; *He*, him, his; *She*, her, hers; *It*, its; *They*, them, their, theirs; *Who*, whom, who's.

Then, under the titles *Adjective*, *Substantive*; teach him to connect these. As, *My hand*, *Your head*, *His foot*, *His feet*, *Her arm*, arms, *Our hats*, *Their shoes*, *John's coat*, *William's band*, &c.

And, in order to furnish him with more *Adjectives*; Under the title *Colours*, you may place *Black*, white, gray, green, blew, yellow, red, &c. And, having shewed the *Particulars*; let him know, *These* are called *Colours*.

The like for *Taste*, and *Smell*; As, *Sweet*, bitter, sour, stink.

And, for *Hearing*; *Sound*, noise, word.

Then, for *Touch* or *Feeling*: *Hot*, (warm,) *Cold*, (cool,) *Wet*, (moist,) *Dry*; *Hard*, soft; *Tough*, brittle; *Heavy*, light, &c.

From whence you may furnish him with more *Examples* of *Adjectives* with *Substantives*; As, *White bread*, *Brown bread*, *Green grass*, *Soft cheese*, *Hard cheese*, *Black hat*, *My black-hat*, &c.

And then, inverting the order, *Substantive* and *Adjective* (with the *Verb*

Verb Copulative between :) As; *Silver is white; Gold is yellow; Lead is heavy; Wood is light; Snow is white; Ink is black; Flesh is soft; Bone is hard; I am sick; I am not well, &c.* Which will begin to give him some notion of *Syntax*.

In like manner, when *Substantive* and *Substantive* are so connected. As; *Gold is a Metal; A Rose is a Flower; Wee are men; They are women; Horses are beasts; Geese are Fowls; Larks are Birds, &c.*

Then, as those before relate to *Quality*, you may give him some other words relating to *Quantity*. As; *Long, short; Broad, narrow; Thick, thin; High, (tall,) low; Deep, shallow; Great, (big,) small, (little;)* Much, little; *Many, few; Full, empty; Whole, part, (piece;)* All, some, none; *Strong, weak; Quick, slow; Equal, unequal; Bigger, less.*

Then, words of *Figure*; As, *Streight, crooked; Plain, bowed; Concave, (hollow) convex; Round, square, three-square; Sphere, (globe, ball, bowl;)* Cube, (die;); *Upright, sloping; Leaning forward, leaning backward; Like, unlike.*

Of *Gesture*; As, *Stand, ly, sit, kneel, stoop.*

Of *Motion*; As, *Move, (stir,) rest; Walk, (go, come;)* Run; Leap; Ride; Fall, rise; *Swim, sink, (drown;)* Slide; Creep, (crawl;); Fly; Pull, (draw,) thrust, throw; Bring, fetch, carry.

Then, words relating to *Time, Place, Number, Weight, Measure, Money, &c.* are (in convenient time) to be shewed him, distinctly. For which the Teacher, according to his discretion, may take a convenient season.

As likewise, *The Time of the Day; The Days of the Week; The Days of the Month; The Months of the Year; and other things relating to the Almanack* Which he will quickly be capable to understand, if Methodically shewed him.

As likewise, the *Names and Situations, of Places, and Countries*, which are convenient for him to know. Which may be orderly written in his Book; and shewed him in *Maps, of London, England, Europe, the World, &c.*

But these may be done at leisure; As likewise, the *Practice of Arithmetick*, and other like pieces of Learning.

In the mean time; (after the Concord of *Substantive* and *Adjective*;) he is to be shewed (by convenient Examples) that of the *Nominative* and *Verb*. As, for instance, *I go, You see, He sit, They stand, the Fire burns, the Sun shines, the Wind blows, the Rain falls, the Water runs; and the like: with the Titles in the top, Nominative, Verb.*

After this, (under the titles, *Nominative, Verb, Accusative,*) give him Examples of *Verbs Transitives*; As, *I see you, You see me, The Fire burns the Wood, The Boy makes a Fire, The Cook roasts the Meat, The Butler lays the Cloth, We eat our Dinner.*

Or even with a *Double Accusative*; As, *You teach me (Writing, or) to Write; John teacheth me to Dance; Thomas tells me a Tale, &c.*

After this; you may teach him the *Flexion* or *Conjugation* of a *Verb*; or, what is equivalent thereunto. For, in our English Tongue, each *Verb* hath but *Two Tenses* (the *Present* and the *Preter*) and *Two Participles*

ples (the *Active* and the *Passive*.) All the rest is performed by *Auxiliaries*. Which (*Auxiliaries*) have no more Tenses, than the other Verbs.

Those *Auxiliaries*, are, *Do, did; Will, would; Shall, should; May, might; Can, could; Must, ought to; Have, had; Am (be,) Was*. And if, by Examples, you can insinuate the signification of these Few Words: you will have taught him the whole Flexion of the Verb.

And here it will be convenient, (once for all,) to Write him out a full Paradigm of some one Verb, (suppose, to *See*,) through all those *Auxiliaries*.

The Verb it self, hath but these Four Words to be learned; *See, saw, seeing, seen*. Save that, after *Thou* in the Second Person singular (in both Tenses) we add *est*; and, in the Third Person singular (in the Present Tense) *eth* or *es*: Or, instead thereof, *st, th, s*. And so in all Verbs.

Then, to the *Auxiliaries*, *Do did, Will would, Shall should, May might, Can could, Must ought to*, we adjoin the Indefinite *See*. And, after *Have had, Am (be) was*, the Passive Participle *Seen*. And so for all other Verbs.

But the Auxiliary *Am* or *Be*, is somewhat Irregular; in a double form;

Am, art, is; Plural, *Are. Was, wast, was*; Plural, *Were*.

Be, beest, be; Plural, *Be. Were, wert, were*; Plural, *Were*.

Be (am,) was, deing, been.

Which (attended with the other *Auxiliaries*) make up the whole *Passive Voice*.

All Verbs (without Exception) in the *Active Participle*, are formed by adding *ing*; As, *See, seeing; Teach, teaching*, &c.

The *Preter tense*, and the *Passive Participle*, are formed (regularly) by adding *ed*. But are oft subject to *Contractions*, and other *Irregularities*, (sometime, the same in both; some time, different.) And therefore it is convenient, here, to give a Table of Verbs (especially the most usual) for those *Three* cases. (Which may, at once, teach their Signification, and their Formation.) As, *Boil, boiled, boiled; Rest, rested, rested; Bake, baked, baked*; &c. *Teach, taught, taught; Bring, brought, brought; Buy, bought, bought*, &c. *See, saw, seen; Give, gave, given; Take, took, taken; Forsake, forsook, forsaken; Write, wrote, written*; &c. With many more, fit to be learned.

The Verbs being thus dispatched; he is then to learn the *Prepositions*. Wherein lies the whole Regimen of the Noun. (For Diversity of Cases, we have none.) The force of which is to be insinuated by convenient Examples, suited to their different Significations. As, for instance,

Of, *A piece of bread; A pint of Wine; The cover of a pot; The colour of gold; A ring of gold; A cup of silver; The Mayor of London; The longest of all*; &c.

And in like manner for, *Off, on, upon; To, unto, till, untill; From; At; In (within,) out (without,) Into, out of; About, over, under; Above, below; Between, among; Before, behind, after; For; By; With, through; Against; Concerning*; And, by this time, he will be pretty well inabled to understand a Single Sentence.

In the last place; he is (in like manner) to be taught *Conjunctions*. (Which serve to connect, not Words onely, but Sentences.) As, *And, also,*

also, likewise; *Either, or, whether; Neither, nor; If, then; Why (wherefore,) because, therefore; But, through, yet; &c.* And these illustrated by convenient Examples, in each case, As,

Because I am cold; therefore I go to the fire; that I may be warm; For it is cold wether.

If it were fair, then it would be good walking: But (however) though it rain, yet I must go; because I promised. With other like instances.

And, by this time, his Book, (if well furnished with plenty of Words; and those well digested, under several Heads, and in good Order; and well recruited from time to time as new words occur;) will serve him in the nature of a *Dictionary* and *Grammar*.

And, in case the Deaf Person be otherwise of a good Natural Capacity; and the Teacher of good Sagacity; By this method (proceeding gradually, step by step,) you may (with Diligence and due Application, of Teacher and Learner,) in a Years time, or thereabouts, perceive a greater progress than you would expect: and a good Foundation layd for farther Instruction, in matters of *Religion*, and other *Knowledge* which may be taught by Books.

It will be convenient, all along, to have Pen Ink and Paper ready at hand, to write down in Words, what you signify to him by Signes; and cause Him to Write (or shew him how to Write) what He signifies by Signes. Which way (of signifying their mind by Signes) Deaf persons are often very good at. And we must endeavour to learn Their language (if I may so call it) in order to teach them Ours: By shewing, what Words answer to their Signes.

'Twill be convenient also, as you go along, (after some convenient progress made,) to Express (in as plain language as may be) the import of some of the Tables. As, for instance,

The *Head* is the Highest part of the *Body*; the *Feet*, the Lowest part; The *Face* is the Fore-part of the *Head*; The *Forehead* is Over the *Eyes*; The *Cheeks* are Under the *Eyes*; The *Nose* is between the *Cheeks*; The *Mouth* is Under the *Nose*, and Above the *Chin*, &c.

And such Plain Discourse, put into Writing, and particularly explained; will teach him by degrees to understand Plain Sentences. And like Advantages, a Sagacious Teacher, may take as occasion offers it self from time to time.

Thus I have, in a Long Letter, given you a Short Account of my Methods (used, in such cases, with good Success;) which to do at Large, would require a Book.

I have taken the pains to draw-up this method, (which is what I have pursued my self in the like case,) as apprehending it may be of use to some others when I am dead. And I am not desirous it should dy with me.

And I have done it as plainly as I could, that it may be the better understood.

I have given onely some short Specimens of such Tables as I had made for my own use, and the use of those whom I was to instruct; but to give them at large, would be more than the work of a Letter; and they are to be varied, as the Circumstances of the Persons, and

and the Places may require, or the prudence of a Teacher shall find expedient.

It is adjusted to the English Tongue, because such were the persons I had to deal with.

To those of another Language, it must be so altered as such Language requires. And perhaps will not be so easily done for another Language as for the English. The Flexion of Nouns, the Conjugation of Verbs, the Difference of Genders, the Variety of Syntax &c. doth in other Languages give a great deal of trouble, which the Simplicity of our Language doth free us from. But this is not my present business.

I Am,

Oxford,
Sept. 30.
1698.

Sir,

Yours to serve you,

JOHN WALLIS.